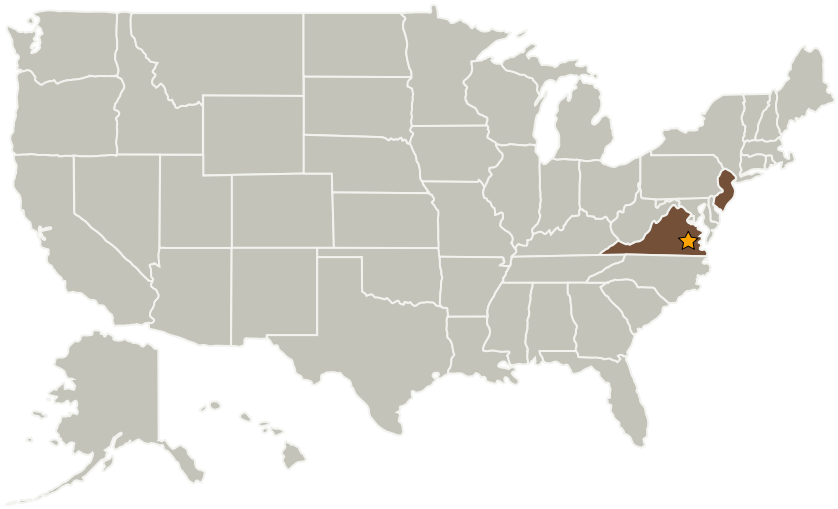
Advanced Silicone-based Coatings for Flexible Fabric Applications, Phase I

Completed Technology Project (2006 - 2006)

Project Introduction

High performance silicone coatings are desired for flexible fabrics used in several space and consumer applications. For instance, the total weight of silicone coatings that are used on Mars Exploration Rovers (MER) airbags can be reduced by improving their thermal stability and mechanical properties. The proposed program focuses on developing advanced silicone coatings by working with a manufacturer of coated and laminated fabrics for industrial and general-purpose applications. In Phase I, we will develop coating formulations, deposit coatings on a few different types of fabrics, and characterize the coatings for various properties that are required for airbag applications. Additionally, plans for commercialization and scale-up will be developed during Phase I for implementation in Phase II, so that the product can be manufactured and marketed in Phase III.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Langley Research Center (LaRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Langley Research Center(LaRC)	Lead Organization	NASA Center	Hampton, Virginia
NEI Corporation	Supporting Organization	Industry Small Disadvantaged Business (SDB)	Piscataway, New Jersey

Primary U.S. Work Locations	
New Jersey	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
  - TX12.1 Materials
    - TX12.1.5 Coatings